

13 April 1987

OPERATIONS

Field Operations Evaluation Program

This regulation establishes responsibilities, criteria, and policies for conducting an operations evaluation program for seismic and electromagnetic pulse (EMP) field locations within this organization. It also defines objectives and establishes procedures for preparing the seismic Operations Evaluation Letter (OEL).

1. General. The Field Operations Evaluation Program is designed to assist seismic and EMP field locations and ensure that the data and records received at headquarters are accurate and of the highest quality. It provides field locations with feedback and guidance through random spot checks so they may assess and improve their training and quality assurance programs. It also aids Det 057 in identification of areas that may require additional emphasis during formal training and allows Mobile Training Team members to better prepare their training package prior to visiting a field location.

2. Responsibilities:

a. The Director of Operations and the Area Headquarters will ensure that field units under their control have an aggressive quality assurance program.

b. The Geophysical Operations Division (DOS) is responsible for the management of the Field Operations Evaluation Program.

c. The Field Operations Branch (DOSB) is responsible for the execution of the Field Operations Evaluation Program and preparation of OELs for seismic field locations. DOSB will also prepare and forward LORAN-C timing charts and updates to EMP field locations to ensure proper timing is maintained.

d. The Global Seismic Operations Center (DOSDB) will monitor data messages for accuracy and proper format. The Seismic Data Control section of DOSDB will transmit edit requirements to field units and receive the edit tapes for review and quality control. Results will be provided to TGE for data management and to DOSB for inclusion in OELs.

e. The Spheric and Hydroacoustic Operations Center (DOSDO/J) will monitor EMP field unit data and advise DOSB of suspected data and timing errors.

3. Procedures for Seismic Detachments:

a. Evaluation of station records, other than magnetic tape records, will be performed by DOSB in the following manner:

(1) Station logs will be reviewed upon receipt and comments requiring special attention will be addressed as required.

(2) At random, 72 hours of data will be selected from each station for a review of the station's procedures and quality of data reporting. As a minimum, the following items will be checked:

(a) Analysis accuracy - ensure that all valid signals recorded on film are reported. The complexity of each station's noise and background will be considered when determining "missed" signals. Analysis accuracy of high-speed, direct-reporting stations will be reviewed as established in each station's Specific Station Requirements (CENR 55-2).

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(b) Film quality - ensure that trace quality, focus, intensity, and spacing is correct. Station ID/date/time displays are correct and clearly readable. Slash and pulse timing is visible on the appropriate traces at the proper intensity and amplitude. Film developed and washed properly.

(c) Film labels and forms - format correct and all required entries made. CEN Forms 49 suitable for microfiche reproduction.

(d) Calibrations - ensure that all calibrations are performed as required.

(e) Station logs - format correct and all required entries made. Entries correspond to film and tape records and provide sufficient details to document station operations for the reporting period.

(f) Any other items deemed necessary.

(3) Quarterly frequency response results will be reviewed upon receipt to ensure all sensors are operating within prescribed tolerances. Discrepancies will be reported to the appropriate station and parent unit by routine message.

b. In conjunction with routine data reduction procedures, DOSDB will maintain a message error log of suspected signal mistimes, format errors, etc. These errors will be verified by DOSB when station records are received and included in the appropriate OEL when necessary.

c. The Seismic Data Control section of DOSDB will review all edit tapes for correct documentation and recording. Results will be provided to DOSB for OEL reporting. This review will ensure:

(1) All required labels are attached and properly formatted.

(2) The verify listing and cover letter account for all edits requested. Missing or incorrect edits will be reported to DOSB for appropriate follow-up.

(3) Edits are recorded in the proper format. Selected edits will be reviewed for correct waveform presentation. This review will be provided to TGE for data management. Discrepancies will be provided to TGE and DOSB for appropriate follow-up.

d. Operations Evaluation Letters, listing comments and discrepancies on analysis accuracy, data records, and magnetic tape, will be prepared by DOSB for each field location. A copy will be provided to the appropriate parent unit and Det 057. Whenever possible, duplicate copies of errors and missed signals will be provided to illustrate a deficient area. OELs will be numbered as an identification aid to ensure all letters are received.

e. When significant discrepancies are discovered which require immediate action, the station will be notified by message with an information copy to the parent unit. The message will contain sufficient information to allow rapid elimination of the discrepancy.

f. When the station or parent unit requires more information than is furnished in the OEL or message, or possesses additional facts which will assist in clarifying reported discrepancies, a letter with pertinent facts and/or questions will be mailed to HQ/DOSB. Station replies should be coordinated with the parent unit before forwarding to headquarters.

g. Because of the unique differences at each seismic station, i.e., background noise, analysis workload, array size, unit manning, etc., and the random evaluation periods, OELs should not be used as a standard for unit comparisons. The only fair comparison is for each station to compare its current record against past OELs and always strive for improvement. Feedback provided in OELs is meant in a positive manner to identify areas of concern and as an aid to improve local quality assurance programs.

4. Procedures for EMP Detachments:

a. In conjunction with routine data reduction procedures, DOSDO/J will advise DOSB of suspected data and timing errors. These errors will be verified by DOSB or TXE. All verified errors will be transmitted to the station and parent unit by message for resolution.

b. DOSB is responsible for entering timing status data into the data base when it is received. In addition, LORAN-C chain corrections will be entered into the data base when they are received from the United States Naval Observatory. Timing charts generated for the LORAN-C stations monitored at each detachment will be forwarded to the detachments by DOSB IAW CENR 55-11.

5. Extensive Operations Evaluations. An extensive evaluation of up to three months may be conducted for new stations, new equipment, or major modifications following satisfactory completion of an Operational Capability Evaluation. Data records and associated documentation will be reviewed to the extent determined necessary by HQ/DOS and TGE or TXE.

6. Records Disposition Instructions. Field and parent unit copies of Operations Evaluation Letters will be maintained as specified in CENR 55-2. HQ copies of these letters will be maintained in accordance with AFR 12-50, Vol II, table 10-1, rule 2.

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SUMMARY OF CHANGES

Title of regulation and organizational titles updated. Requirement for an extended period Unit Error Log deleted. Text revised to stress the assistance aspect vs. the inspection aspect of the Operations Evaluation Letter. DOSDB edit tape review procedures specified.